

FIGURE 2: NORTH CAROLINA GUIDELINES CROSS CONNECTION CONTROL IN WATER DISTRIBUTION SYSTEMS

These guidelines are supplemental to Section .0406(b). These guidelines are intended as a minimum requirement. Public water suppliers may adopt more stringent requirements. Each supplier of water shall conform to the minimum requirements established in these guidelines.

I. Degree of Hazard:

- A. Severe: Actual or potential threat of contamination that presents an imminent danger to the public health with consequence of serious illness or death.
- B. Moderate: One that presents foreseeable and significant potential for pollution, nuisance, aesthetically objectionable or other undesirable alterations of the drinking water supply.

II. Backflow Prevention Assembly Requirements:

Degree of hazard	RPZ*	DCVA**	Air Gap
Severe	X	-----	X
Moderate	-----	X	-----

* Reduced pressure zone

** Double check valve assembly

*** This is not intended to be an exhaustive list

III. Facilities that Require Installation of a Backflow Preventer***:

A. Moderate hazard - DCVA:

1. Fire sprinkler systems without booster pump facilities or chemical additives.
2. Connection to tanks, lines and vessels that handle non-toxic substances.
3. Most commercial establishments.
4. Automatic service stations, bakeries and beauty shops with no health hazard and bottling plants with no back pressure.
5. etc.

B. Severe hazard - RPZ or air gap:

1. Lawn sprinkler systems
2. Wastewater treatment plants
3. Connection to an unapproved water system or unapproved auxiliary water supply
4. Connection to tanks, pumps, lines, steam boilers or vessels that handle sewage, lethal substances, toxic or radioactive substances
5. Fire sprinkler systems with booster pump facilities (such as fire department connections [FDCs]) or chemical additives
6. Buildings with five or more stories above ground level
7. Hospitals and other medical facilities
8. Morgues, mortuaries and autopsy facilities
9. Metal plating facilities
10. Bottling plants (subject to back pressure)
11. Canneries
12. Battery manufacturers
13. Exterminators and lawn care companies
14. Chemical processing plants
15. Dairies

16. Film laboratories
17. Car wash facilities
18. Dye works
19. Laundries
20. Swimming pools
21. Water front facilities
22. etc.

IV. Approved Backflow Prevention Assemblies:

Meets American Society of Sanitary Engineering (ASSE) standard and carries ASSE seal or is on the University of Southern California approval list.

V. Backflow Prevention Assembly Installation:

Backflow prevention assemblies must be located in a place where it is readily accessible for regular testing, maintenance and inspection. Bypass lines parallel to a backflow prevention assembly shall have an approved backflow prevention assembly installed that is equal to that on the main line.

A. RPZ:

1. Above ground installation preferred.
2. Below ground vault shall have positive drainage with adequate gravity drainage to atmosphere.
3. 12 inches minimum clearance from vault walls and floor.
4. Installation in accordance with manufacturer's recommendations.

B. DCVA:

1. Vertical or horizontal installation acceptable.
2. Adequate drainage shall be provided if installed below ground.